



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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CHICAGO, IL 60604-3590

JUN 04 2013

REPLY TO THE ATTENTION OF: E-19J

Public Comments Processing
Attn: FWS-R3-ES-2013-0032
Division of Policy and Directives Management
U.S. Fish and Wildlife Service
4401 North Fairfax Drive, MS 2042-PDM
Arlington, Virginia 22203

Re: Draft Environmental Impact Statement and Proposed Habitat Conservation Plan and
Incidental Take Permit for the Indiana Bat for the Fowler Ridge Wind Farm,
Benton, County, Indiana – CEQ No. 20130081

To Whom It May Concern:

In accordance with our responsibilities under Section 309 of the Clean Air Act (CAA), the National Environmental Policy Act (NEPA), and the Council on Environmental Quality regulations for implementing NEPA, the U.S. Environmental Protection Agency (U.S. EPA) has completed its review of the Draft Environmental Impact Statement (Draft EIS) prepared by the U.S. Fish and Wildlife Service (USFWS) for a Habitat Conservation Plan (HCP) for an existing wind farm and proposed Phase IV expansion located in Benton County, Indiana. The wind farm is owned by four separate companies: Fowler Ridge Wind Farm LLC, Fowler Ridge II Wind Farm LLC, Fowler Ridge III Wind Farm LLC, and Fowler Ridge IV Wind Farm LLC (FRWF). The applicant, FRWF, has applied to USFWS for an incidental take permit (ITP) under the Endangered Species Act of 1973 (ESA), as amended, for proposed impacts to the Federally-endangered Indiana bat (*Myotis sodalis*). The applicant has developed the HCP to ensure that impacts to the Federally-listed Indiana bat are adequately minimized and mitigated in accordance with the requirements of Section 10 of the ESA.

The Draft EIS analyzes the impacts associated with construction of Phase IV and the operation and decommissioning of the four phases of the Fowler Ridge Wind Farm. USFWS proposes to approve the HCP and issue a 22-year ITP to FRWF. The proposed project, specifically Phase IV, would involve construction of up to 94 turbines along with associated access roads and infrastructure, with generation of up to 150 megawatts (MW) of electricity. The first three phases of FRWF consist of 355 wind turbines with a total energy capacity of 600 MW. Total build-out for all four phases will be up to 449 turbines with a total energy capacity of 750 MW.

U.S. EPA supports the development of renewable energy resources, as recommended in the National Energy Policy Act of 2005 and President Obama's New Energy for America plan, in an expeditious and well-planned manner.

The Draft EIS analyzes the impacts of three action alternatives as well as the "No Action" alternative. The alternatives differ with respect to operation of all existing and proposed turbines. Under the No Action Alternative, the applicant would construct Phase IV, but all 449 turbines would

be non-operational from sunset to sunrise from August 1 through October 15, the primary fall migratory period of the Indiana bat, each year during the operational life (22 years) of the FRWF. Implementation of this alternative would be expected to result in complete avoidance of impacts to Indiana bats; therefore, an ITP pursuant to Section 10 of the ESA would not be necessary and an ITP would not be issued for the existing phases of the FRWF or future Phase IV. In addition, an HCP would not be prepared and the Indiana bat would not have the conservation benefits (e.g., mitigation) afforded to it through development and implementation of an HCP. However, FRWF would commit to implementing the FRWF Bird and Bat Conservation Strategy (BBCS) as part of the No Action alternative to reduce the potential for impacts to migratory birds and bat species.

Under the Applicant's Preferred Action, the "5.0 meters per second (m/s) Cut-In Speed Alternative," seasonal operational adjustments would be implemented, an HCP would be prepared to avoid, minimize, mitigate, and monitor take of Indiana bats, and an ITP pursuant to Section 10 of the ESA would be issued for the existing phases of the FRWF and the future Phase IV. The HCP contains the following measures designed to avoid, minimize, mitigate, and monitor take of Indiana bats:

- 1) FRWF would minimize potential take of Indiana bats from operations of the project by implementing seasonal turbine operational adjustments. Based on the reduced number of overall bat fatalities and lack of Indiana bat fatalities found during the spring and summer compared to the fall during three years of monitoring at FRWF Phases I-III, USFWS has determined the risk to Indiana bats at FRWF occurs during the fall. Because take of Indiana bats is expected to occur only during the fall migration season and Indiana bat fatalities are not expected during the spring migration, summer maternity, or winter seasons, no operational adjustments would be made during the spring migration, the summer maternity season, or after October 15.
- 2) FRWF would implement operational practices that are expected to reduce take of Indiana bats. However, some level of unavoidable, incidental take may still occur. Therefore, FRWF would mitigate for the unavoidable impacts of the taking of Indiana bats by coordinating, funding, and monitoring the protection and restoration of both summer habitat and winter habitat. Specifically, FRWF would preserve and restore summer maternity habitat in the vicinity of existing maternity colonies in Putnam County, Tippecanoe County, Vermillion County, or Warren County; and protect winter habitat by installing a new bat gate near the entrance of a Priority 1 hibernaculum, Wyandotte Cave, in Crawford County, Indiana.

For the term of the ITP (22 years), FRWF will raise the turbine cut-in speed to 5.0 m/s on a nightly basis from sunset to sunrise, adjusted for sunset/sunrise times weekly, starting August 1 and ending October 15 annually. HCP implementation would also include post-construction monitoring, adaptive management, and mitigation focused on the Indiana bat, but would also benefit other avian and bat species. FRWF would commit to implementing the FRWF BBCS as part of this alternative to reduce the potential for impacts to migratory birds and bat species.

A non-preferred alternative, the "3.5 m/s Cut-In Speed (Feathered) Alternative", the minimally-restricted operations alternative, would consist of the same build-out as the Applicant Preferred Action, with the exception that all turbines would be feathered until a cut-in speed of 3.5 m/s is reached on a nightly basis from sunset to sunrise, starting August 1 and ending October 15 annually. In addition to feathering turbines below 3.5 m/s, FRWF would implement an adaptive management plan that includes adjusting cut-in speeds in 0.5 m/s increments, if needed, to ensure compliance with authorized take limits. Although feathering blades below the 3.5 m/s cut-in speed is anticipated to reduce take of Indiana bats, some level of unavoidable, incidental take may still occur.

To mitigate for unavoidable impacts of the taking of Indiana bats under this alternative, FRWF will coordinate, fund, and monitor the protection and restoration of both summer habitat and winter Indiana bat habitat. The monitoring program that would be implemented as part of the HCP would consist of two components: take limit compliance monitoring and mitigation effectiveness monitoring. The goal of take limit compliance monitoring is to ensure compliance with the terms of the ITP, whereas, the goal of mitigation effectiveness monitoring is to ensure the success of mitigation efforts at offsetting the impacts of unavoidable take of Indiana bats from the FRWF. Operations under this alternative are expected to have greater adverse effects on Indiana bat populations than the Applicant Preferred Action.

Another alternative, the "6.5 m/s Cut-In Speed (Feathered) Alternative," the maximally-restricted operations alternative, includes implementation of an HCP to avoid, minimize, mitigate, and monitor take of Indiana bats in accordance with Section 10 of the ESA. This alternative would consist of the same build-out as the Applicant Preferred Action, with the exception that all turbines would be feathered until a cut-in speed of 6.5 m/s is reached on a nightly basis from sunset to sunrise, starting August 1 and ending October 15 annually. In addition to feathering turbines below 6.5 m/s, FRWF would implement an adaptive management plan that includes adjusting cut-in speeds in 0.5 m/s increments, if needed, to ensure compliance with authorized take limits. Although feathering blades below the 6.5 m/s cut-in speed is anticipated to reduce take of Indiana bats, some level of unavoidable, incidental take may still occur.

To mitigate for unavoidable impacts of the taking of Indiana bats under this alternative, FRWF will coordinate, fund, and monitor the protection and restoration of both summer habitat and winter Indiana bat habitat. The monitoring program that would be implemented as part of the HCP would consist of the same two components as the 3.5 and 5.0 m/s alternatives: take limit compliance monitoring and mitigation effectiveness monitoring. Operations under this alternative are expected to have fewer adverse effects on Indiana bat populations than the Applicant Preferred Action. Fowler Ridge would commit to implementing the FRWF BBBS as part of this alternative to reduce the potential for impacts to migratory birds and bat species.

We commend the activities the applicant has taken to avoid and minimize impacts to species, including siting the project in an area of moderate avian use; developing the project in phases to observe the effect of the project on a state-listed avian species, the American golden plover, prior to development of phases located closer to the plover Important Birding Area (IBA); micro-siting all Phase IV turbines in cultivated croplands and locating all Phase I - III turbines and facilities to avoid native bird habitat and Indiana Department of Natural Resources Gamebird Habitat Areas; building the transmission line to Avian Power Line Interaction Committee avian-safe standards; burying collection lines underground; equipping the Project substation with downward-facing shields on all lights; and, providing sensitive species awareness training for all on-site workers.

Based on our analysis, U.S. EPA rates the Draft EIS as "**Environmental Concerns – Insufficient Information**" (EC-2). Please see the enclosed "Summary of Rating Definitions." We recommend the Final EIS address the following comments regarding aquatic resources, financial assurance, reclamation, best management practices, and avian mortality in the Final EIS.

Aquatic Resources - Streams

We commend the applicant's commitment to avoidance of all wetlands within the project area. The Draft EIS indicates access roads, etc. for the 94-turbine proposed project would not entail any permanent stream crossings. However, the Draft EIS does not indicate: 1) the number of temporary

stream crossings proposed; 2) the linear feet of both temporary and permanent stream impacts; or 3) whether a Clean Water Act Section 401 Water Quality Certification will be required and obtained from the Indiana Department of Environmental Management, a Construction in a Floodway Permit will be required and obtained from the Indiana Department of Natural Resources, and a Nationwide or Regional General Permit will be required and obtained, from the U.S. Army Corps of Engineers for project-related crossings of Waters of the United States. Because proposed stream crossings are most likely temporary, it is expected that these types of stream impacts can be restored. The Final EIS should discuss whether any permanent stream crossings will be required, and measures taken to obtain regulatory approvals for both temporary and permanent impacts to Waters of the U.S. and Waters of the State. The Final EIS should discuss permits to be obtained, restoration measures to be taken, and associated mitigation (if applicable).

Aquatic Resources – Intermittent or Ephemeral Streams

Additionally, the Draft EIS does not indicate if any stream crossings would occur at intermittent or ephemeral streams. EPA recommends the Final EIS clarify this point. In the event that intermittent or ephemeral streams will be crossed, EPA supports the use of directional boring of underground utilities to avoid direct stream impacts. However, there is a possibility that intermittent streams may not be dry during construction timeframes. In the event that any intermittent or ephemeral streams have active flow at the time of construction, EPA recommends that a commitment be made to directionally bore, rather than open-trench through open stream flow. This commitment should be made in the Final EIS.

Financial Assurance

The Draft EIS indicates the lifespan of Phase IV will most likely be 20-22 years. An obligation to decommission the facility and perform reclamation was discussed in detail. However, information regarding financial assurance for decommissioning and reclamation was not included in the Draft EIS. Additionally, information regarding financial assurance for mitigation, monitoring, and the adaptive management portions of the HCP was not discussed in the Draft EIS. EPA recommends the Final EIS include a discussion focused on USFWS' regulatory authority under the ESA to require financial assurance from an applicant to meet their responsibilities as stated in the HCP.

Reclamation

The Geology and Soils Section of the Draft EIS indicates that areas subject to temporary disturbance will be re-vegetated in accordance with the Erosion and Sediment Control Plan. In non-cultivated areas, re-vegetation will involve reseeding with native vegetation or other suitable seed mix based on land use and mulching to encourage growth. We recommend referring to the Indiana Department of Natural Resources' Native Plant List for Northern Indiana to prepare a list of plants suitable for use during re-vegetation. Please include this list as an appendix to the Final EIS.

Best Management Practices (BMPs)

BMPs are mentioned in various sections of the DEIS as a way to minimize impacts to a particular resource. We recommend the Final EIS contain typical BMPs that could be implemented to reduce impacts, particularly during construction and decommissioning. For example, Section 5.12.6, Mitigation for Impacts to Air Quality and Climate, contains a statement that BMPs (e.g., watering roads) would be implemented to reduce the amount of fugitive dust generated during construction and decommissioning. Expanding on the idea of BMPs to include a list of typical measures (i.e., cover construction materials and stockpiled soils, cover concrete batch materials, minimize disturbed areas, and other dust abatement techniques) would provide reviewers with a better understanding of

the actions that could be employed to reduce impacts. EPA recommends the Final EIS include examples of BMPs typically used for this type of project.

Final Road Preparation, Erosion Control, and Reclamation and Decommissioning

The Draft EIS indicates that, during reclamation and decommissioning, all unused construction materials and waste will be picked up and removed from the project area and waste materials will be disposed of at approved and appropriate landfills. Likewise, if decommissioning is undertaken after the useful life of the turbines is complete, turbines, infrastructure, and facilities will be removed. Most components and materials will be removed, recycled, or disposed of in an approved and appropriate waste management facility. EPA recommends the Final EIS be revised to indicate that any and all materials from the construction and/or the decommissioning phase will be removed from the project site, recycled, or disposed of appropriately.

Other Sources of Mortality During Operation

Section 5.5.3, Operation Effects, Other Sources of Mortality During Operation, discusses impacts to birds from meteorological towers (MET towers). Direct avian mortality appears to be the primary impact associated with these structures depending on tower height, lighting, color, structure, and the presence of guy wires (The Ornithological Council 2007). According to The Ornithological Council, white strobe lighting typically results in the lowest mortality rate. Seven permanent, un-guyed MET towers, fitted with red strobe lighting, are located within the FRWF project area, and a maximum of three additional permanent, unguyed MET towers will be constructed for Phase IV, and, presumably, fitted with red strobe lighting. **We recommend the use of white strobe lighting on MET towers be discussed with the Federal Aviation Administration (FAA) to reduce avian mortality in the project area.** If the use of white strobe lighting is not permissible, we recommend the Final EIS include the rationale behind the continued use of red strobe lighting at FRWF.

We commend the various measures the Applicant has incorporated to avoid and minimize impacts to birds, including equipping the Project substation with downward facing shields on all lights. Additionally, all operators and technicians on-site are required to turn off internal lights in turbines at night when lights are not required for safety or compliance purposes. According to the Draft EIS, of particular concern relative to bird collisions with all types of structures are episodic events involving large numbers of one or a few bird species during migration. These have been recorded at multiple locations, and are associated with lighting that attracts or disorients birds. Weather conditions and the location of the carcasses suggested that the birds were attracted to bright sodium vapor lights present at a substation located adjacent to three turbines. After these lights were extinguished, no other episodic events occurred at the substation or adjacent turbines (Kerns and Kerlinger 2004). Similarly, in September 2011 at the Mount Storm Wind Energy Facility in West Virginia, 59 bird carcasses were found on one day, 31 of which were found at one turbine whose internal nacelle light had been inadvertently left on overnight; the nacelle light was thought to have attracted the birds to the turbine during foggy weather conditions. Based on the above findings, we recommend use of motion-detection lights that will shut off automatically after a pre-determined amount of time when no human movement is detected. For a nominal cost, this type of device will ensure avian impacts are reduced from unnecessary lighting at night.

Draft Eagle Conservation Plan Guidance

On February 18, 2011, USFWS announced the availability of Draft Eagle Conservation Plan Guidance (Guidance). The draft Guidance provides a means of compliance with the Bald and Golden Eagle Protection Act by providing recommendations for: 1) conducting early

pre-construction assessments to identify important eagle use areas; 2) avoiding, minimizing, and/or compensating for potential adverse effects to eagles; and 3) monitoring for impacts to eagles during construction and operation. As stated in the Draft EIS, the Draft Eagle Conservation Plan Guidance interprets and clarifies the permit requirements in the regulations at 50 C.F.R. 22.26 and 22.27, but does not impose any binding requirements beyond those specified in the regulations.

Per the February, 2011 guidance regarding eagle conservation plans for wind energy facilities, an eagle risk assessment was conducted for the proposed project. As stated in the Draft EIS, "The public comment period on the draft Guidance ended on May 19, 2011. The Service anticipates having final guidance available in 2012." We recommend the Final EIS indicate whether this Guidance has been finalized and whether all relevant Guidance changes have been included in a revised bald and golden eagle management plan included in the Bird and Bat Conservation Strategy for the proposed project.

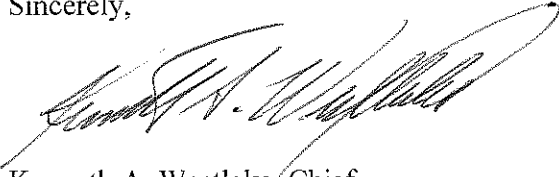
Whooping Crane Risk Assessment

According to the Draft EIS, approximately 94.6 acres of wetlands were identified in the vicinity of the project area with marginal habitat quality for whooping cranes. Approximately 38 acres of open water, primarily small ponds, were identified within the project area. It is possible that migrating whooping cranes may occasionally stopover in Benton County. A risk assessment determined that direct mortality during Project construction is very unlikely, especially when construction occurs outside of the spring and fall migration periods. Direct mortality was also determined to be unlikely during the steady migratory flight, since whooping cranes migrate at an altitude much higher than the rotor swept area of the turbines. The risk assessment identified greater potential for collision with turbines and/or the proposed project's transmission line during stopover periods when whooping cranes fly between foraging and roosting sites at sunset and sunrise under low-light conditions. Inclement weather was also determined to increase the chance of collision.

According to the Draft EIS, the potential for adverse effects to whooping cranes, particularly from turbines, cannot be reduced to discountable or insignificant levels. The risk assessment concluded that, for this reason, if the flock was protected under the ESA, the appropriate determination would be that operation of the proposed project is likely to adversely affect whooping cranes. Due to the presence of marginal stopover habitat in the proposed project area, the risk assessment considered the potential for disturbance and displacement of whooping cranes to be possible. Even through the overall risk to whooping cranes at RWF was determined to be low, based on the small total population size of the flock (~100 cranes) and the marginal quality of the habitat within the proposed project area, the Draft EIS indicated that marking power lines reduces collision rates. Based on the above, we recommend the Final EIS indicate whether the applicant will mark power lines to reduce adverse effects to whooping cranes using the project area during stopover periods when whooping cranes fly between foraging and roosting sites at sunset and sunrise.

We appreciate the opportunity to review this Draft EIS. If you have any questions or comments regarding the contents of this letter, I can be reached via telephone at 312-886-2910 or via email at westlake.kenneth@epa.gov; Kathy Kowal of my staff can be reached at 312-353-5206 or via email at kowal.kathleen@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth A. Westlake", written over a horizontal line.

Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Enforcement and Compliance Assurance

Enclosure – Summary of Rating Definitions

cc: Forest Clark, USFWS-Bloomington
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